ATTACHMENT B TO MEMORANDUM IN SUPPORT OF MOTION TO ENTER

September 30, 2020

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Submitted via email

Re: *United States, et al.* v. *HOVENSA L.L.C.*, Civil Action No. 1:11-cv-00006, D. J. Ref. No. 90-5-2-1-08229/1

Dear Mr. Clark,

I appreciate the opportunity to provide public comments on the First Modification of the Consent Decree ("Modification") in the above-referenced matter. I am a US Virgin Islands attorney and former longtime resident of St. Croix. A graduate of St. Croix Country Day School (now Good Hope Country Day School) whose family has lived on island since 2000, I developed my conservation ethic and ultimately decided to pursue a career in environmental advocacy due to my years spent on St. Croix.

I. Introduction

I respectfully urge you to reject the Modification as inappropriate, improper, and inadequate because:

- 1) It implies a false premise that the Limetree Bay Terminals (formerly known as Hovensa and HOVIC) refinery (hereinafter Refinery) did not shut down, when the Refinery should be considered a new major stationary source under the Prevention of Significant Deterioration (PSD) rules and thus subject to the standards therein;
- 2) In order to effectively protect the public health and welfare of the people of the Virgin Islands, the cancer registry referenced therein must be established and significant community research undertaken *before* the commencement of polluting activity contemplated;
- 3) The compliance assessment and reporting protocols referenced therein allow for Limetree to self-report, when this responsibility should properly be undertaken by EPA Region 2; and
- 4) The Refinery activity contemplated by the Modification implicates and does not address serious concerns regarding federally-listed species and Sandy Point National Wildlife Refuge.

II. Discussion

1. <u>The Modification Falsely Implies that the Refinery Did Not Shut Down for PSD/Clean Air Act (CAA) Permitting Purposes</u>

As of the date of these comments, the Refinery currently has a draft Plantwide Applicability Limit permit (PAL) pending before EPA Region 2,¹ and that PAL is fundamentally and problematically predicated on the pretense that the Refinery did not shut down following its closure by Hovensa. Contrary to the Modification's assertion that "neither Hovensa nor Limetree Bay has permanently shut down and surrendered permits for the Refinery or portions of the Refinery,"² EPA precedent and case law clearly established that the Refinery did shut down and must thus be treated as a new stationary source under PSD rules. The Modification confuses the matter by referring to permits in broad and nonspecific terms, when the PAL has been pending for close to a year as of the date of the Modification's publication. The Modification as written must thus be rejected in order to account for practical and legal realities.

While I acknowledge the April 5, 2018 letter authored by former Assistant Administrator Wehrum to Limetree regarding EPA's reactivation policy (Wehrum Letter), this letter should be disregarded due to its lack of conformity with precedent and in light of the ethics charges against former Assistant Administrator Wehrum. Finally, the pertinent circumstances and regulations applicable to a PAL make it clear that this regime, which is fundamentally based on "actual" emissions, is not intended for facilities like this one. Limetree, which should properly be considered to be comprised of all "new" units for PSD applicability.

i. Reactivation Policy

At its foundation, the PAL is fundamentally and fatally flawed because it should properly be evaluated as a "new" stationary source under EPA's well-established "reactivation policy." Predicated on longstanding agency interpretation of the CAA, the reactivation policy mandates that "reactivation of facilities that have been in an extended condition of inoperation may trigger PSD requirements as 'construction' of either a new major stationary source or a major modification of an existing stationary source." This policy is predicated on the notion that "to preserve their ability to reopen without a new source permit, EPA believes owners and operators of shutdown facilities must continuously demonstrate concrete plans to restart the facility sometime in the reasonably foreseeable future." Under this policy, "shutdowns of more than two years . . . are presumed to be permanent" and are thus subject to all PSD requirements when reactivated. It is then "up to the facility operator to rebut this presumption." *Monroe Electric*, the foundational case which defines the contours of the reactivation policy, held that a "key

¹ See: https://www.epa.gov/sites/production/files/2019-09/documents/limetree-draft_pal_permit.pdf

² Modification at 4. The undersigned notes that this section applies to PSD analysis — *not* as to whether the terms of Section 229 of the Consent Decree have come to pass.

³ In the matter of Entergy Louisiana – Monroe Electric Generating Plant, Order on Petition No. 6-99-2 (June 11, 1999). (Hereinafter, "Monroe").

⁴ Id.

⁵ *Id*. at 7.

⁶ *Id*. at 9.

⁷ *Id*. at 8.

⁸ Id.

determination" in this analysis is "whether the owner or operator has demonstrated a **continuous intent** to reopen." While "no single factor is likely to be conclusive," some factors that EPA has examined in determining continuous intent include "the amount of time the facility has been out of operation, the reason for the shutdown, statements by the owner or operator regarding intent, cost and time required to reactivate the facility, status of permits, and ongoing maintenance and inspections that have been conducted during the shutdown." Evaluating the facts and circumstances of the Refinery in light of these factors, it is evident that there has not been a continuous intent to restart the refinery since its shutdown in 2012.

The amount of time that the Refinery has been shut down clearly indicates that the Refinery should be presumed a new source under the PSD rules. Under the reactivation policy, articulated in case law and EPA statements of policy, shutdowns of more than two years are presumed to be permanent.¹¹ The Refinery shuttered in January 2012, nearly nine years prior to the date of these public comments,¹² and it has not conducted oil refining activities since. Accordingly, under this factor, the Refinery should be considered a "new" source for PSD review.

As for the second factor, the reasoning behind Refinery's 2012 shutdown indicates that the Refinery should be treated as a new source under the PSD rules. Hovensa shut down the Refinery for financial and economic reasons, specifically due to its having incurred losses of over \$1.3 billion over three years, caused primarily by weakness in demand for petroleum products and the addition of new capacity in emerging markets. The magnitude of the financial losses driving the shutdown taken into account with global economics and Hovensa ultimately filing for bankruptcy¹⁴ likens the Refinery's shutdown to other instances where EPA has found other facilities' economically-motivated shutdowns to be considered permanent. Accordingly,

⁹ *Id.* at 9. Emphasis added.

 $^{^{10}}$ *Id*. at 8 – 9.

¹¹ See Cmtys. for a Better Environment v. Cenco Ref. Co., 179 F. Supp. 2d 1128 (C.D.Cal.2001) (finding that a refinery shut down for six years must be treated as a new source); Noranda Lakeshore Mines, Memo from John Seitz, Director, Stationary Source Compliance Division, OAQPS, to David Howekamp, Director, Air Mgt. Div. Region IX (May 27, 1987) (shut down leach acid plant must be considered new source when reopening); SME Cement, Inc., Memo from Edward Reich, Director Division of Stationary Source Enforcement to Sandra Gardebring, Region V (Oct. 3, 1980) (cement kiln shut down for three years held to be a new source necessitating PSD permitting upon reactivation); Babylon #2, Memo from Edward Reich, Director, Stationary Source Enforcement Division to William Sawyer, Region II (Aug. 8, 1980) (waste incinerator shut down for five years held to be treated as a new source); See generally, Monroe.

¹² Eric Watkins, *Hovensa to Close 500,000 b/d Virgin Islands Refinery*, OIL & GAS JOURNAL, January, 2012. ¹³ *Id*.

¹⁴ In re Hovensa L.L.C., Debtor, Chapter 11 Bankruptcy No. 15-BK-10003 MFW (V.I. Dist. Ct., Sept. 15, 2015). See also, Justin Jacobs, Hovensa Files for Bankruptcy, Ending a Long-running Dispute, Petroleum Economist, September, 2015 ("Hovensa filed for bankruptcy 15 September, saying that it lacked the resources to cover \$1.864bn in debts and that it had reached a \$184m deal with Limetree Bay Holdings, an affiliate of energy-focused private equity firm ArcLight Capital, to sell the facility's **storage terminals**, according to court documents."). Emphasis added. The Undersigned notes that the Wehrum Letter fails to mention Hovensa's bankruptcy.

¹⁵ See Monroe. at 5 (shutdown due to "increased competition and demand-side management."); Noranda Lakeshore Mines (shutdown "due to market conditions" was held to be permanent); compare to Memorandum from John B. Rasnic to Douglas M. Skie (Nov. 19, 1991) (on file with the EPA) (Waterton Power Plant: shutdown due to repair of defective turbine not held to be permanent).

taking into account the circumstances surrounding the Refinery's economically and financially-motivated shutdown, this factor weighs in favor of a finding that the Refinery was permanently shut down.

Evaluating the third factor, "statements by the owner or operator regarding intent," it is clear that the owners have not maintained a continuous intent to reopen the Refinery since the 2012 shutdown. While the Wehrum Letter claims to rely on "company statements, press releases, and various correspondence from 2011 through 2017" to support its conclusion that the Refinery was not permanently shut down, express indicia of intent by and regarding Hovensa make it clear that Hovensa did not maintain continuous intent to restart the Refinery; in fact, for some time, it attempted to operate the Refinery as a long-term oil storage terminal. The press release issued by Hess immediately following the closure in January 2012 stated that: "Following the shutdown, the complex will operate as an oil storage terminal." In August 2012, a local news outlet reported that: "Since the closure, [Hovensa] has championed the idea of converting the refinery into an oil storage facility."¹⁷ However, then-Governor deJongh "dismissed Hovensa's oil storage facility proposal, saying it simply would not benefit the territory." Hovensa's intentions to shutter the refinery are especially clear by its officials' purported belief that Hovensa's concession agreement with the Government of the Virgin Islands was rendered "moot since the facility shut down." A few months later, a January 2013 S&P Global article published stated that Hovensa then had "plans to become an oil storage terminal," and then referred to the Government of the Virgin Islands' rejection of "Hovensa's long-term oil storage terminal plan."²⁰ While it would appear that the Government of the Virgin Islands intended to keep the Refinery open in 2012-2013, statements of the then-owner, Hovensa, indicate that its intent was to operate the Refinery as an oil storage terminal; as the Government of the Virgin Islands is not the owner of the Refinery, its intentions are immaterial to this analysis.

In September 2015, Hovensa came to an initial agreement with Limetree and ultimately transferred the ownership of the Refinery to Limetree; this fact, alone, weighs in favor of a finding that the Refinery should be considered a "new" source for PSD review. EPA has stated that, "A change in ownership does not, standing alone, render a stationary source subject to PSD provisions. However, the circumstances surrounding a change in ownership may be probative of whether the shutdown of the source should be deemed permanent, which is the key analysis that must be made under EPA's reactivation policy."²¹ As discussed in the preceding paragraph, it is clear that Hovensa did not continuously intend to restart the Refinery but intended to operate same as an oil storage facility. Crucially, upon taking ownership, Limetree also did not intend to restart the facility, at least not continuously from its point of acquisition until the present. As one

¹⁶ Press Release, Hess Corporation, Hess Announces Charge Related to Closure of Hovensa Joint Venture Refinery (Jan. 28, 2012) (on file with Hess).

¹⁷ Source staff, Governor Slams Hovensa Proposal, Threatens Lawsuit, St. John Source, Aug. 7, 2012.

¹⁸ *Id*.

¹⁹ Id.

²⁰ John-Laurent Tronche, *Hovensa Refinery, Once World's Largest, Likely to Remain* Shut, S&P GLOBAL PLATTS, Jan. 18, 2013 (while both speculative and anonymous, the Undersigned also notes the following passage from the article for context regarding the reality of Hovensa's intent during this time period: "When asked if Hovensa would ever restart, one source said, 'Nope.'").

²¹ See Memorandum from David P. Howekamp to Robert T. Connery (Nov. 6, 1987) (on file with the EPA) (*Cyprus Casa Grande,* interpreting 40 C.F.R. § 52.21(b)(2)(iii)(g)).

news outlet stated, "Limetree's parent company ArcLight Capital owns pipelines and storage facilities across the US and will seek to operate the terminal, rather than the refinery as a whole."²² Coverage of a later deal whereby Sinopec planned to "lease more than three quarters of the operational storage at the Hovensa oil terminal," allowed ArcLight (Limetree's parent company) "two years to assess what provisions [of the refinery] would be utilized and what would be dismantled and removed," reporting a payment structure within the agreement for "the sale of scrap metal."²³ While former Governor Mapp stated that the deal included "[p]otentially restarting refinery operations," he emphasized a plan to "look at the entire south shore area and pursue other business and opportunities," such as an asphalt plant.²⁴ Accordingly, while is clear that the Government of the Virgin Islands here aspired to restart the Refinery, it is also clear that Hovensa and Limetree have not maintained a continuous intent to restart the refinery since its 2012 shutdown, as evinced by repeat representations of their intentions to operate the Refinery as an oil storage facility or, at least in part, to sell it off as scrap metal. In applying this standard to an idled refinery in California, one federal District Court held that: "[I]t does appear that for at least some short period of time, [the facility] intended to shutdown and dismantle the facility, not restart it. Monroe Electric indicates that this is fatal."25 Thus, this factor weighs heavily in favor of a finding that the owners of the Refinery did **not** maintain a continuous intent to restart it, and accordingly, the Refinery should be considered a new source for applicability of the PSD rules

As for the fourth factor in the reactivation policy analysis, cost and time to reactivate the facility, the more money and time that will be required to get the facility up and running, the more likely that the source is going to be found to be a "new" source for PSD applicability. The Wehrum Letter appears to have analyzed this factor backwards, finding the Refinery not to be a "new" source when "Hovensa spent over \$400 million to maintain the restart capability of the refineries. The analyst of July 2018, the investment required to "refurbish and restart a portion of the [Refinery]" was reported to be \$1.4 billion. The magnitude of this investment aligns with a 2015 statement by Fadel Gheit, an oil and gas analyst: "Hovensa's improvement needs are too large for it to be worth restarting. . . the refinery just isn't competitive anymore. The analyst further stated that: "To restore full refining operations, it needs significant investments, in the billions, not millions of dollars, depending on the final configuration of the facility[.]" Accordingly, the magnitude of the investment required to restart the Refinery supports a finding that, for the purposes of PSD review, the Refinery should be considered permanently shut down.

The fifth factor in the reactivation policy analysis — status of permits — at most, weighs neutrally in evincing intent to restart. While Hovensa and, later, Limetree have maintained several of the environmental permits for the facility, most of these would be required, anyway,

²² Justin Jacobs, *Hovensa Files for Bankruptcy, Ending a Long-Running Dispute*, Petroleum Economist, Sept. 22, 2015. Emphasis added.

²³ Source Staff, Sinopec, Freepoint Lease Hovensa Storage: Update, ARGUS, DEC. 1, 2015.

²⁴ Id.

²⁵ Cmtys. for a Better Environment, 179 F. Supp. 2d at 1147.

²⁶ See Id. at 1146 ("The numbers are higher than in other cases where the EPA found facilities permanently shutdown. . . the cost and time for reactivation factor slightly favors finding a permanent shutdown.");

²⁷ Wehrum Letter.

²⁸ Collin Eaton, St. Croix Oil Refinery gets \$1.4 Billion Investment, Plans to Restart, July 2, 2018.

²⁹ Kelsey Nowakowski, *Monarch Energy Still Interested in Hovensa, Despite Obstacles*, Oct. 2, 2015.

for the Refinery's wastewater treatment and oil storage facilities, as well as for the containment of hazardous waste at the site.³⁰ While the Wehrum Letter appears to put some weight on the fact that the facility has "maintained critical refinery equipment," this situation likens itself to situations such as the *Cenco* case, where the court held that the refinery was shut down for PSD purposes even when the company maintained equipment at the facility "such as utility, storage, wastewater treatment, stormwater management and emergency equipment." Thus, taking this fifth factor into account, the analysis still, on balance, favors a finding that the Refinery must properly be considered a "new" source for the purposes of PSD applicability.

The final factor, "ongoing maintenance and inspections" that have taken place since the shutdown, weighs in favor of a finding that the Refinery should be considered a new stationary source. Crucial to this determination is whether this ongoing maintenance renders the facility easily able to be restarted; in the *Noranda Lakeshore Mines* opinion, EPA found the shutdown of a roaster leach plant in question to be permanent despite evidence that the plant was maintained during shutdown. 32 In the Waterton Power Plant opinion, EPA held that "the continued maintenance of the facility throughout the years," and "the resulting ability to bring the plant back on line with only a few weeks of work," presented a "unique situation" where a plant shut down beyond the two year presumption threshold was found not to be considered a new source for PSD applicability.³³ As is evident from the aforementioned investment (over \$1 billion) needed to bring the Refinery into functional condition, taken into consideration with previouslydiscussed indicia of the Refinery's condition from shutdown until present, the EPA order requiring at least \$700 million in upgrades to pollution controls to bring the Refinery into compliance with the CAA,³⁴ combined with the stated 18-month timeline for refurbishment,³⁵ it is clear that the Refinery has not continuously been maintained in a condition where it could be restarted easily. Accordingly, this factor indicates that the Refinery should be considered a "new" source for PSD review applicability.

In sum, reviewing the relevant facts and circumstances in light of the EPA's reactivation factors, it is evident that the Refinery can only reasonably be found to be a "new" source for purposes of PSD review. Accordingly, implications regarding the PAL, which is inappropriately predicated and calculated on a presumption that the Refinery is an "existing" source, must be rejected.

ii. Problems with the April 5, 2018 Concurrence Letter

³⁰ EPA, Envirofacts, Limetree Facility Summary, https://enviro.epa.gov/enviro/multisys2 v2.get list?facility uin=110000307864 (executed on Nov. 22, 2019); EPA, FRS Facility Detail Report, https://enviro.epa.gov/enviro/fii query dtl.disp program facility (executed on Nov. 22, 2019)

³¹ Cmtys. for a Better Environment, 179 F. Supp. 2d at 1147.

³² Noranda Lakeshore Mines.

³³ Memorandum from John B. Rasnic to Douglas M. Skie (Nov. 19, 1991) (on file with the EPA) (Waterton Power Plant).

³⁴ Press Release, The United States Department of Justice, Nation's Second Largest Refinery to Pay \$700 Million to Upgrade Pollution Controls at U.S. Virgin Islands Facility (Jan. 26, 2011) (on file with Department of Justice).

³⁵ Collin Eaton, St. Croix Oil Refinery gets \$1.4 Billion Investment, Plans to Restart, July 2, 2018.

In addition to being misaligned with pertinent EPA precedent, as established in the prior subsection, the Wehrum Letter must be disregarded due to the circumstances surrounding former Assistant Administrator Wehrum's (Wehrum) departure from EPA. Wehrum resigned from EPA in June 2019, amid an investigation by the Energy and Commerce Committee into charges that Wehrum violated pertinent ethics rules by failing to recuse himself from matters involving his utility industry legal clients.³⁶ Shortly after his resignation, EPA's inspector general launched an additional investigation into whether Wehrum's "efforts at the EPA to weaken climate change and air pollution standards" improperly benefited his former fossil fuel industry clients.³⁷ While the Undersigned is not aware of any evidence that the Wehrum Letter was, in itself, a direct result of misconduct by Wehrum or Limetree, the nature of the charges upon which Wehrum is being investigated — abusing his position to improperly benefit certain regulated parties — begs reconsideration, particularly taken in conjunction with the fact that it represents a clear departure from EPA precedent as applied to these facts. Prior to Wehrum's departure from EPA, the Wehrum Letter drew attention for being "unusual" due to its "deference to the project proponent's . . . explanation of the project and how it should be defined and construed."38 This industry deference is troubling in the context of Wehrum's resignation and investigation.

2. <u>The Modification Must Require that the Cancer Registry be Established Prior to Allowing for Potentially Carcinogenic Pollution</u>

In order to effectively and proactively protect the public health of the people of the Virgin Islands, the Modification must require that the cancer registry and pediatric environmental specialty health unit³⁹ be fully established and completed *before* the commencement of the polluting activities contemplated therein. This is critical, as the people of the USVI tend to have worse health outcomes and access to fewer quality healthcare resources as compared to counterparts in the mainland United States. Some of these poor health outcomes include a higher infant mortality rate and greater risk of heart disease. And, to exacerbate these issues, the population in South Central St. Croix (the area surrounding the Refinery) suffers several factors that indicate impeded access to healthcare services. An estimated 26.9% of the South Central St. Croix population lives below the poverty line. People living in poverty typically face greater barriers to healthcare access compared to people who are not living in poverty, such as lacking health insurance and funds to cover out-of-pocket medical expenses.

³⁶ Juliet Eilperin & Brady Dennis, *Top EPA Official Resigns Amid Scrutiny Over Possible Ethics Violations*, THE WASHINGTON POST, June 26, 2019.

³⁷ Lisa Friedman, *Bill Wehrum, an Archietect of E.P.A. Rollbacks, Faces New Ethics Inquiry*, July 22, 2019.

³⁸ Eric L. Hiser, *Harbinger of Things to Come: Limetree Bay Terminals*, NSR LAW BLOG, March 25, 2019.

³⁹ Modification at 68.

⁴⁰ Gloria B. Callwood et al., Health and Health Care in the U.S. Virigin Islands: Challenges and Perceptions (2013), *reprinted in* NCBI HHS Public Access Author manuscript, ABNF J. 2012 Winter; 23(1): 4-7 (the Undersigned notes that the cancer information in this article is outdated).

⁴¹ FEMA St. Croix Recovery Plan at 10.

⁴² U.S. Department of Health & Human Services, Financial Condition and Health Care Burdens of People in Deep Poverty, https://aspe.hhs.gov/basic-report/financial-condition-and-health-care-burdens-people-deep-poverty (July 16, 2015).

This is supported by the estimate that 30% of the USVI population does not have health insurance (compared to 12% in the United States).⁴³

Public health impacts from oil refining activities on-island have long been a concern of the territory.⁴⁴ This concern is warranted, as the criteria pollutants are well-known to cause adverse health impacts.⁴⁵

According to EPA, Particulate Matter exposure is linked to a variety of health problems, including premature death in people with heart or lung disease, nonfatal heart attacks, irregular heartbeat, aggravated asthma, decreased lung function, and respiratory symptoms." ⁴⁶ Carbon Monoxide can be of particular concern for people with certain types of heart disease. ⁴⁷ This is significant given the increased risk for heart disease suffered by Virgin Islanders. Additionally, Sulfur Dioxide and Nitrogen Oxides — particularly Nitrogen Dioxide — are known to harm the human respiratory system. ⁴⁸

Volatile Organic Compounds (VOCs) from petroleum refineries are associated with a number of health effects; short exposure "may cause dizziness, fatigue, nausea, and depression . . [and] certain Volatile Organic Compounds may even result in mutations and cancers, and . . . damage to the central nervous system, kidneys, and liver." Benzene, a VOC "of particular concern since it is carcinogenic," is already being emitted by the Refinery's current oil storage activities; for example, in 2018, the Refinery released 6,839 pounds of benzene. The undersigned acknowledges EPA's 2011 study monitoring VOCs on St. Croix, including downwind from the Refinery. However, this study lasted only four months. According to Kathleen Arnold-Lewis, territorial director of the Chronic Disease Program at the Charles Harwood Memorial Hospital on St. Croix, "the rate of cancer deaths increased in the Virgin Islands from 2003 – 2013, overtaking heart disease as the leading cause of death in the

⁴³ Samantha Artiga et al., *Health Care in Puerto Rico and the U.S. Virgin Islands: A Six-Month Check-Up After the Storms (Report)*, KFF, APR. 24, 2018.

⁴⁴ See Caroline A. Browne, Op-ed: Learning from the Lessons of the Past About Oil Refineries, The St. John Source July 24, 2018; AARP Virgin Islands, St. Croix Residents — Are You Worried About the Air You Breathe?, AARP, July 14, 2011.

⁴⁵ EAR at 134. More detailed discussion of air pollution

⁴⁶ EPA, Particulate Matter (PM) Pollution, Health and Environmental Effects of Particulate Matter (PM), https://www.epa.gov/pm-pollution/health-and-environmental-effects-particulate-matter-pm.

⁴⁷ EPA, Carbon Monoxide (CO) Pollution in Outdoor Air, Basic Information about Carbon Monoxide (CO) Outdoor Air Pollution, https://www.epa.gov/co-pollution/basic-information-about-carbon-monoxide-co-outdoor-air-pollution#Effects.

⁴⁸ EPA, Sulfur Dioxide (SO2) Pollution, Sulfur Dioxide Basics, https://www.epa.gov/so2-pollution/sulfur-dioxide-basics#effects; EPA, Nitrogen Dioxide (NO2) Pollution, Basic Information about NO2, https://www.epa.gov/so2-pollution/sulfur-dioxide-basics#effects; EPA, Nitrogen Dioxide (NO2) Pollution, Basic Information about NO2, https://www.epa.gov/so2-pollution/sulfur-dioxide-basics#effects; Pollution, Basic Information about NO2, https://www.epa.gov/no2-pollution/basic-information-about-no2#Effects.

⁴⁹ Aiswarya Ragothaman and William A. Anderson, "Air Quality Impacts of Petroleum Refining and Petrochemical Industries," J. *Environments* **2017**, *4*, 66; doi:10.3390/environments4030066.

 $^{^{\}rm 50}$ Ragothaman and Anderson at 4.

⁵¹ EPA, Enforcement and Compliance History Online, "Detailed Facility Report: Limetree Bay Terminals (FKA Hovensa)," https://echo.epa.gov/detailed-facility-report?fid=110000307864, last visited September 3, 2019. https://echo.epa.gov/detailed-facility-report?fid=110000307864, last visited September 3, 2019. https://www3.epa.gov/region02/waste/hovensa/hovensa-VI-Fact-Sheet-Aug-18.pdf, last visited September 3, 2019.

territory."⁵³ The undersigned notes that the Refinery was operating at a high volume during much of that time period.

In addition to general public cancer risk from passive environmental exposure, epidemiological evidence indicates "an increased risk for pleural cancer" in refinery workers, possibly due to past exposure to benzene.⁵⁴ Limetree has also noted the continued presence of asbestos in the Refinery,⁵⁵ an additional risk for workers.

In sum, given the high vulnerability of the surrounding community (and the USVI, generally) to certain health conditions and barriers to healthcare — and the likelihood of these existing problems being connected to the Refinery's prior activities — establishment of the cancer registry and pediatric environmental specialty health unit must be completed before polluting activities are allowed to commence.

3. <u>The Modification Must Require Monitoring and Reporting from a Third Party – Not Limetree</u>

For the terms of the Modification to be carried out, adequate monitoring and reporting are critical; however, problematically, the Modification provides for reports to be produced by Limetree. This is self-reporting mechanism is problematically reminiscent of how, according to Senator Nellie Rivera-O'Reilly, "the U.S. government allowed Hovensa to 'self-report' its emissions, even though some residents had complained of becoming 'violently ill' from pollution." Hovensa's unsustainable environmental protection and business practices ultimately resulted in multi-million dollar fines for violating the CAA and later, bankruptcy. Accordingly, in the interest of not repeating history, EPA Region 2 should be placed in charge of monitoring Limetree's monitoring data for violations, rather than relying on self-reporting.

4. <u>The Activity Contemplated by the Modification Implicates and Does Not Address Serious Concerns Regarding Imperiled Species and Sandy Point National Wildlife Refuge.</u>

Finally, the activity contemplated by the Modification implicates and does not address serious concerns regarding federally-listed species, Sandy Point National Wildlife Refuge, and climate change.

i. <u>Imperiled Species Concerns</u>

⁵³ Susan Ellis, V.I. Central Cancer Registry will Report in 2018, THE ST. JOHN SOURCE, March 21, 2017.

⁵⁴ Pesatori et. al., "Cancer risk in oil refinery workers: a mortality study in four Italian plants," J. Occupational Medicine, 71:1, 2014.

⁵⁵ Susan Ellis, *Decades Old Asbestos Cases Inch Forward*, The St. Croix Source, May 13, 2019,.

⁵⁶ Tim Craig, *Hurricanes Left Behind Mountain of Trash in the Virgin Islands – And There's Nowhere to put it*, THE WASHINGTON POST, March 4, 2018.

The Refinery activities contemplated by the Modification have the potential to adversely affect at least 23 ESA-listed species, including four sea turtle species, seven coral species, and four whale species.⁵⁷ These species are as follows:

- 1) Hawksbill sea turtle Endangered
- 2) Leatherback sea turtle Endangered
- 3) Green sea turtle (both North and South Atlantic Distinct Population Segments "DPS") Threatened
- 4) Loggerhead sea turtle Threatened
- 5) Nassau grouper Threatened
- 6) Scalloped hammerhead shark (Central Atlantic and Southwest Atlantic DPS) Threatened
- 7) Oceanic whitetip shark Threatened
- 8) Gian manta ray Threatened
- 9) Elkhorn coral Threatened
- 10) Staghorn coral Threatened
- 11) Pillar coral Threatened
- 12) Lobed star coral Threatened
- 13) Mountainous star coral Threatened
- 14) Boulder star coral Threatened
- 15) Rough cactus coral Threatened
- 16) West Indian manatee Threatened
- 17) Blue whale Endangered
- 18) Fin whale Endangered
- 19) Sei whale Endangered
- 20) Sperm whale Endangered
- 21) Least tern Endangered⁵⁸
- 22) St. Croix ground lizard Endangered
- 23) Roseate tern Threatened

It is crucial that the Modification address imperiled species, as the Refinery was constructed before the enactment of the ESA,⁵⁹ and acute loss of biodiversity has taken place in recent history.⁶⁰ The Refinery presents serious risks to wildlife vis-à-vis the air emissions, as well as other impacts of the Refinery including, but not limited to, as oil spills, other accidents, and ship strikes. Accordingly, it is apparent that the Refinery activities will almost certainly

⁵⁷ See generally NOAA Fisheries, SER-2018-19292, Re: Limetree Bay Terminal Single Point Mooring, St. Croix, USVI (SAJ-2017-00416 (SP-JCM)) Draft Biological Opinion, February 12, 2019. (hereinafter "USACE BiOp"); Environmental Assessment Report prepared for Major Coastal Zone Management (CZM) Permit Application No. CZX-10-19(L&W); https://www3.epa.gov/region02/waste/fshovens statementof basis aoc3.pdf/

⁵⁸ U.S. Fish & Wildlife Service, Midwest Region Endangered Species (the endangered Interior Least Tern overwinters in the Caribbean).

⁵⁹ The Refinery was completed in **. U.S. Fish & Wildlife Service, Endangered Species Overview (last updated: December 11, 2018) (the ESA was enacted in 1973).

⁶⁰ United Nations, UN Report: Nature's Dangerous Decline 'Unprecedented'; Species Extinction Rates 'Accelerating,' (May 6 2019) https://www.un.org/sustainabledevelopment/blog/2019/05/nature-decline-unprecedented-report/.

result in the take⁶¹ of Endangered or Threatened species. I thus implore DOJ to reject the Modification due to its silence on this issue.

1. <u>Air Emissions Impacts</u>

The air emissions contemplated by the Refinery activities in the Modification pose significant risk to many of the above-listed species. Avian species, such as the Least Tern and Roseate Tern, are particularly vulnerable to the impacts of air pollution, particularly from Nitrogen Oxide and Particulate Matter. Nitrogen Oxide can cause direct and irreversible damage to birds' lungs.⁶² "Long-term exposure can lead to inflammation, ruptured blood vessels, and lung failure."⁶³ Nitrogen Oxide additionally presents hazards by soil and water to become more acidic via acid rain.⁶⁴ "[T]he primary hypothesis for the effects of acid deposition on terrestrial birds is that soil acidification can reduce the abundance of ground- dwelling invertebrates that some birds require for adequate calcium supply."⁶⁵ Additionally, "[a] decreased availability of high calcium based aquatic invertebrates due to acidification is known to adversely affect egg laying and eggshell integrity in birds, and the growth of hatchling birds and neonatal mammals."⁶⁶ Particulate Matter is a concern, as well; birds are more exposed to Particulate Matter than humans because they have a higher breathing rate and spend more time in the open air.⁶⁷ They are additionally vulnerable to PM becoming lodged into their lungs.⁶⁸

Air pollution additionally presents threats to the above-listed marine species, particularly coral and air-breathing mammals. As noted above, Nitrogen Oxide contributes to the acidification of water, including ocean acidification. Indeed, some "water pollution" actually begins as air pollution and settles into waterways and oceans. In addition to emissions of Nitrogen Oxide, the facility will emit significant amount of greenhouse gases, including carbon dioxide, which is the primary driver of global warming and ocean acidification. Coral species, like the species listed above, are extremely vulnerable to the impacts of ocean acidification; this is due to their being "dependent on calcium carbonate for shell formation . . . because the additional carbonic acid in the ocean shifts the chemical equilibrium of the carbonate system, increasing the bicarbonate ion concentration and decreasing the carbonate shell— and skeleton—

⁶¹ Under the ESA, "[t]he term "take" means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." 16 USCS § 1532(19).

 $^{^{62}}$ Kenneth Qin, Birds Suffer from Air Pollution, Just Like We Do, Audubon California, July 23, 2015.

⁶³ *Id*.

⁶⁴ Gary M. Lovett et al., *Effects of Air Pollution on Ecosystems and Biological Diversity in the Eastern United States*, The YEAR IN ECOLOGY AND CONSERVATION BIOLOGY, *reprinted* in Lovett NYAS, 2009.

https://www.caryinstitute.org/sites/default/files/public/reprints/Lovett_NYAS_2009.pdf. 65 Id

⁶⁶ Scheuhammer, Effects of acidification on the availability of toxic metals and calcium to wild birds and mammals, 71 Envtl. Pollut., 329 (1991).

⁶⁷ Kenneth Qin, *Birds Suffer from Air Pollution, Just Like We Do*, AUDUBON CALIFORNIA, July 23, 2015.

⁶⁹ Ida-Maja Hassellov et al., Shipping Contributes to Ocean Acidification, GEOPHYSICAL RESEARCH LETTERS, VOL. 40, 2731–2736, June 6, 2013, https://agupubs.onlinelibrary.wiley.com/doi/pdf/10.1002/grl.50521

⁷⁰ M. Vikas & G.S. Dwarakish, *Coastal Pollution: A Review*, 4 AQUATIC PROCEDIA, 381, 385 (2015) https://reader.elsevier.com/reader/sd/pii/S2214241X15000528?token=501AB6501D3EA9B53D2041319AA6F4C7B E4D2F2589E201784011DECFBC425731D99A4F8B857F731C38640B2EFBAFA45B.

building organisms, such as . . . reef-forming corals."⁷¹ Ocean acidification will increase their vulnerability "by increased energetic costs needed to maintain net calcification."⁷² Noncalcareous marine flora and fauna also suffer effects, albeit less obvious effects of ocean acidification, such as neurological changes that alter behavior.⁷³

Finally, research indicates that VOCs can impact air-breathing mammals, particularly cetaceans. One study of the chemical composition of Grey Whales' exhales matched against a database of VOCs found in humans.⁷⁴

2. <u>Impacts on Wildlife from Oil Spills and Similar Accidents</u>

Oil spills, a foreseeable negative impact of an oil refinery, pose a serious risk to the 23 ESA-listed species in the footprint of the refinery. Oil can harm wildlife through inhalation, ingestion, physical contact, and absorption. Contamination has the potential to occur at all levels of the food chain. Ingestion can kill animals immediately. It can also result in damage to the lungs, liver, or kidneys; immune system suppression, skin irritation and ulceration; behavioral changes that may affect an animal's ability to find food or avoid predators; and impaired reproduction (affecting the species' ability to survive and recover). Sea turtles are prone to oil becoming trapped in their throats through swallowing and inhalation, resulting in toxic oil compounds becoming absorbed into organ tissues. Sea turtles may be susceptible to oil contamination when swimming to shore to nest. Mother turtles can pass on oil toxins to their young developing in their eggs. Therefore, oil spills pose a very serious and immediate threat to listed turtles like those connected to the 14 turtle nests noted near the Refinery.

Scientists have long established that extreme weather events, particularly hurricanes, have been increasing in intensity as the climate continues to warm, and this is projected to continue. 81 The actual frequency and increasing severity of hurricanes are crucial factors to consider in evaluating ESA impacts from the Refinery because severe weather events are often tied to ecologically-devastating discharges from industrial facilities. I am especially concerned

⁷¹ Aaron L. Strong et al., *Ocean Acidification 2.0: Managing our Changing Coastal Ocean Chemistry*, 64 BioSience, 581, 581 (2014).

⁷² *Id*. at 584.

⁷³ Id.

⁷⁴ Raquel Cumeras et al., *Chemical Analysis of Whale Breath Volatiles: A Case Study for Non-Invasive Field Health Diagnostics of Marine Mammals*, 4 Metabolites, 790-806 (2014) https://www.mdpi.com/2218-1989/4/3/790/htm.

⁷⁵ *See generally* U.S. Fish and Wildlife Service, Effects of Oil on Wildlife and Habitat, June 2010, https://www.fws.gov/home/dhoilspill/pdfs/DHJICFWSOillmpactsWildlifeFactSheet.pdf.

⁷⁶ *Id*.

⁷⁷ Id.

⁷⁸ NOAA Office of Response and Restoration, "How Do Oil Spills Affect Sea Turtles?" June 16, 2016, https://response.restoration.noaa.gov/about/media/how-do-oil-spills-affect-sea-turtles.html, last visited September 3, 2019.

⁷⁹ *Id*.

⁸⁰ EAR at 130. The undersigned notes that these nests "include nests which were laid by leatherbacks."

⁸¹ See 2017: Climate Science Special Report: A Sustained Assessment Activity of the U.S. Global Change Research Program (D.J. Wuebbles, et. al.), U.S. GLOBAL CHANGE RESEARCH PROGRAM, "NATIONAL CLIMATE ASSESSMENT" (2014); Sonia I. Seneviratne, et al., Intergovernmental Panel on Climate Change, Changes in Climate Extremes and their Impacts on the Natural Physical Environment (2012).

by the catastrophic oil spill that Hurricane Dorian caused in the Bahamas in September 2019.⁸² Famously, Hurricane Katrina caused the release of 1.05 million gallons of mixed crude oil from the Murphy Oil Refinery in Louisiana in 2005.⁸³ Less famously but more pertinently, in 1989, Hurricane Hugo caused a spill of 10,000 barrels of oil from the Refinery in question. The risk of such events is only going to increase with the reality of a changing climate, dramatically so in the US Virgin Islands.⁸⁴

Due to the toxicity of oil and the rate at which it can spread, wildlife mortality from oil spills can be catastrophic. For example, Deepwater Horizon oil spill "likely harmed or killed about 82,000 birds of 102 species; about 6,165 sea turtles; as many as 25,900 marine mammals[.]" In sum, the deleterious potential impacts of oil spills upon listed and socially valuable fishery wildlife cannot be overstated.

Unfortunately, oil spill "response" is often extremely ineffective. While cleaning animals affected by an oil spill may present a comforting image to the public, scientific studies indicate that such "clean up" efforts may be largely futile. For example, one 1996 study of brown pelicans fouled by an oil spill, "cleaned," and then released back into the wild found that the majority "died or failed to mate again . . . [and] the researchers concluded that cleaning brown pelicans couldn't restore them to good breeding health or 'normal survivability.'" Following the 2002 sinking of the *Prestige*, whereby the split-in-half tanker spilled more than 70 million liters of bunker fuel, German biologist Silvia Gaus studied thousands of "cleaned" animals and concluded that "the post-treatment survival rate of oil-soaked birds is less than one percent." The negative impacts of well-intentioned cleanup efforts are not confined to birds, but apply equally to sea turtles, too. According to NOAA, "Spill response and cleanup operations . . . can harm sea turtles unintentionally. Turtles can be killed after being struck by response vessels or as a result of oil burning and skimming activities. Extra lighting and activity on beaches can disrupt nesting and hatchling turtles, as well as incubating eggs."

⁸² Aaaron Clark, Hurricane Dorian Rips Roofs off Bahamas Oil Storage Tanks, Causes 'Catastrophic' Spilling, TIME, Sept. 6, 2019.

⁸³ US EPA et. seq., "Murphy Oil Spill Fact Sheet, February 2006,

http://www.columbia.edu/itc/journalism/cases/katrina/Federal%20Government/Environmental%20Protection%20Agency/Murphy%20Oil%20Spill%20Fact%20Sheet%20Feb%202006.pdf, last accessed September 3, 2019.

⁸⁴ U.S. Global Change Research Program, "Fourth National Climate Assessment, Chapter 20: U.S. Caribbean," https://nca2018.globalchange.gov/chapter/20/, last accessed September 3, 2019.

⁸⁵ Center for Biological Diversity, "A Deadly Toll,"

https://www.biologicaldiversity.org/programs/public lands/energy/dirty energy development/oil and gas/gulf oil_spill/a_deadly_toll.html, last visited September 5, 2019.

⁸⁶ See generally Andrew Nikiforuk, Why We Pretend to Clean Up Oil Spills, HAKAI MAGAZINE VIA SMITHOSIAN MAGAZINE, July 12, 2016, https://www.smithsonianmag.com/science-nature/oil-spill-cleanup-illusion-180959783/, last visited September 4, 2019.

⁸⁷ Id.

⁸⁸ Id.

⁸⁹ NOAA Office of Response and Restoration, "How Do Oil Spills Affect Sea Turtles?" June 16, 2016, https://response.restoration.noaa.gov/about/media/how-do-oil-spills-affect-sea-turtles.html, last visited September 3, 2019.

The sheer scale and speed at which spilled oil can spread over water presents a serious practical concern regarding recovery efforts, even when recovery workers are mobilized and ready. Jeffrey Short, a retired National Oceanic and Atmospheric Administration research chemist who studied the aftermath of the 2010 Deepwater Horizon disaster in the Gulf of Mexico as well as the Exxon Valdez spill in Prince William Sound, noted that **the Exxon Valdez spill grew at the alarming rate of half a football field per second over two days.** It is worth noting that the Exxon Valdez spill happened as a result of a ship collision with a reef, and not during a serious tropical cyclone and its resultant winds and waves, as is a likely oil spill scenario here.

Additionally, despite the incorporation of several response and recovery technologies. post-spill oil recovery levels are often in reality quite low. Estimates indicate that, out of the total amount of oil it spilled in the 2010 Deepwater Horizon spill, "BP recovered 3 percent through skimming, 17 percent from siphoning at the wellhead, and 5 percent from burning." Despite occurring 20 years later, this recovery rate was not a substantial improvement over the Exxon Valdez spill where an estimated 14 percent of the oil was recovered. 92 This is due to fundamental shortcomings on some recovery methods. Conventional containment booms, for example, do not work in areas with severe waves (which are often where an oil spill is prone to happen, e.g., during a severe weather event), and solutions like burning oil causes air pollution by turning water pollution "into sooty greenhouse gases." As a practical matter, we also question how quickly Limetree's oil spill response team will be able to address an oil spill that happens during a severe weather event such as a tropical cyclone, as extreme winds and precipitation can last for several hours. As a report prepared for two First Nations tribes and the City of Vancouver, Canada summarized the matter: "Actual oil spills . . . reinforce the reality that collecting and removing oil from the sea surface is a challenging, time-sensitive, and often ineffective process, even under the most favourable conditions."94

Due to a polystyrene incident caused by contractors working for Limetree, I am extremely concerned about the potential impacts to wildlife from discharge of other dangerous materials, particularly during inclement weather. When Tropical Storm Karen passed the south shore of St. Croix on September 24, 2019, more than fifty 110-pound polystyrene floats from the installation of the Limetree pipeline broke loose and washed ashore. Polystyrene, a petroleum-based non-biodegradable foam is a known hazard to wildlife because it can cause intestinal blockages when ingested (which happens easily and often when marine species mistake polystyrene for food). It is additionally dangerous because, being chemically absorbent, it can pick up and concentrate other pollutants in the ocean — rendering it extremely dangerous when

⁹⁰ Nikiforuk.

⁹¹ *Id*.

⁹² Id.

⁹³ Id.

⁹⁴ Nuka Research and Planning Group, LLC, "Oil Response Analysis: Technical Analysis of Oil Spill Response Capabilities and Limitations for Trans Mountain Expansion Project," May 1, 2015, https://vancouver.ca/images/web/pipeline/NUKA-oil-spill-response-capabilities-and-limitations.pdf, last visited September 4, 2019.

⁹⁵ Source Staff, Refinery's Foam Plastic Litters South Shore Months After September Storm, Nov. 18, 2019.

⁹⁶ Source Staff, Why New York Banned Polystyrene Foam, July 1, 2015.

ingested by wildlife such as sea turtles.⁹⁷ As of November 18, 2019, pieces of polystyrene, some as small as bits of rice, were still seen washing up on St. Croix's beaches.⁹⁸

The polystyrene incident and Limetree's slow, lacking response thereto highlight the acute risk that this facility poses to St. Croix's wildlife, including and especially the 23 ESA-listed species noted herein. It is self-evident that the continued construction and operation of the Refinery will effectuate the take of imperiled wildlife. Tropical Storm Karen was, by St. Croix standards, a fairly mild tropical cyclone event. As severe weather events increase in intensity with climate change, it is highly foreseeable that such events will occur again. Most of Limetree's rhetoric since the incident has focused on "response." Yet as is apparent from the continued presence of polystyrene pieces, adequate prevention is the only effective means to prevent jeopardy to listed species.

3. <u>Impacts from Ship Strikes</u>

The listed species in the impact zone of the facility are additionally at risk from increased vessel traffic that will necessarily accompany the restart of Refinery activities. Marine vessel traffic presents tremendous hazards to wildlife, both from the potential for oil spills (the implications of which are discussed at length, above) and from direct strikes. This concern is pertinent to many of the species that live in the sea near the Refinery, particularly sea turtles and whales.

All species of sea turtle are vulnerable to vessel strikes as they bask near the surface, breathe at the surface, or forage in shallow areas or on prey near the sea surface. Of Given the proximity of the Refinery to sea turtle nesting areas, it is of particular concern that adult sea turtles are at increased risk of strike during breeding and nesting season. According to NOAA Fisheries, "[i]t is estimated that hundreds of sea turtles are struck by vessels in the United States every year, and many of them are killed without being observed."

Ship strikes present a serious mortality risk to whales, ¹⁰³ as well. In particular, ship strikes of Sperm and other species of whale have been documented throughout the Caribbean, including documented cases in nearby Puerto Rico. ¹⁰⁴

⁹⁷ Id

⁹⁸ Source Staff, *Refinery's Foam Plastic Litters South Shore Months After September Storm*, Nov. 18, 2019.

⁹⁹ Id.

¹⁰⁰ NOAA Fisheries, Understanding Vessel Strikes, June 25, 2017,

https://www.fisheries.noaa.gov/insight/understanding-vessel-strikes, last accessed September 5, 2019.

¹⁰¹ *Id*.

¹⁰² *Id*.

¹⁰³ International Whaling Commission, "Ship Strikes: Collisions Between Whales and Vessels,"

https://iwc.int/index.php?cID=html 191, last visited September 5, 2019.

¹⁰⁴ NMFS, "Large Ship Strike Database," January 2004,

https://www.greateratlantic.fisheries.noaa.gov/shipstrike/news/shipstrike03.pdf. See also: International Whaling Commission, "Ship Strikes: Collisions Between Whales and Vessels," https://iwc.int/index.php?cID=html 191, last visited September 5, 2019.

Accordingly, due to the concerns listed above, I maintain fundamental concerns with the Refinery activities in regards to imperiled species impacts.

ii. Sandy Point National Wildlife Refuge

The Refinery restart will additionally cause serious, potentially irreparable harm to Sandy Point National Wildlife Refuge (Sandy Point), an important resource to St. Croix for its wildlife protection and tourism benefits. Sandy Point is located approximately 10 miles down-wind and down-current from the Refinery and is federally-designated critical habitat for the leatherback sea turtle. It is also a vital nesting habitat for critically endangered hawksbill sea turtles and threatened green sea turtles. Every year, thousands of visitors visit Sandy Point to enjoy the beach, and thousands more visit to participate in guided sea turtle nesting and hatching observation. One USFWS report estimates that 11,000 people visit Sandy Point, every year. Thus, it is evident that Sandy Point's preservation is critical to the protection of sea turtles and St. Croix's tourism economy. Accordingly, in the interest of preserving this vital, federally-protected critical habitat and crucially important local resource, I urge DOJ to reject the Modification as written due to its silence on this issue.

¹⁰⁵ 44 Fed. Reg. 17710.

 ¹⁰⁶ U.S. Fish and Wildlife Service, "Sandy Point National Wildlife Refuge: Wildlife & Habitat,"
 https://www.fws.gov/refuge/Sandy Point/wildlife and habitat.html, last visited September 5, 2019.
 107 U.S. Fish and Wildlife Service, "Sandy Point National Wildlife Refuge: Visitor Activities,"
 https://www.fws.gov/refuge/Sandy Point/visit/visitor activities.html, last visited September 5, 2019.
 108 Susan Silander, U.S. Fish and Wildlife Service, "Sandy Point National Wildlife Refuge,"
 https://ufdcimages.uflib.ufl.edu/UF/00/09/34/95/00001/sdpcon.pdf, last visited September 5, 2019.

III. <u>Conclusion</u>

For the aforementioned reasons, I respectfully urge DOJ to reject the Modification as written. Please feel free to contact me with any questions. Thank you for your consideration.

Respectfully submitted,

Elizabeth Leigh Neville, Esq.